

for a radiosonde at an altitude of 20 km above mean sea level, assuming 4/3 Earth radius.

**Reason:**

These additional methods are presently in the Rules of Procedure and should be included in this Table to avoid unnecessary reference to another document.

USA/ /108 MOD                      In the case of No. S9.15, delete "(See Appendix S5)" at the end of the remarks column.

**Reason:**

Since this text is already in Appendix S5, it appears pointless to refer to Appendix S5.

Reference of Article S9	Calculation Method	Remarks
USA/ /109 MOD		
3.4 h) Non-GSO -		See also Table S5-1A <sup>1</sup>

---

Coordination with the Fixed Service of an administration is not required in the bands 2160-2200 MHz or 2500-2535 MHz if

- a) the frequency assignments recorded in the Master Register with a favourable finding with respect to S11.31, or not notified but in use or planned to be brought into use within the next 3 years, use analogue modulation and the pfd radiated over the territory of this administration into these frequency assignments does not exceed the thresholds in MOD RR 2566, or
- b) the frequency assignments recorded in the Master Register with a favourable finding with respect to S11.31, or not notified but in use or planned to be brought into use within the next 3 years, use digital modulation and the fractional degradation of performance caused into reference digital fixed service assignments located in the territory of this administration does not exceed the thresholds in MOD RR 2566, and

terrestrial

USA/ /110 MOD

3.4 j)

...coordination  
distance of  
1000 km.

Reason:

To eliminate unnecessary coordination for some services meeting technical conditions. This incorporates improvements studied by the ITU-R into the coordination procedure.

- 
- c) the application of the simulation (standard computation method described in ADD Appendix ZZZ) to reference fixed service frequency assignment located in the territory of this administration results in an interference level which does not exceed the limits indicated in [Doc. WP CPM/8].

Coordination with the Fixed Service of an administration is not required in the band 2483.5-2500 MHz if the frequency assignments recorded in the Master Register with a favourable finding with respect to S11.31, or not notified but in use or planned to be brought into use within the next 3 years, and the PFD produced at the earth's surface by emissions from space stations radiated over the territory of this administration into these frequency assignments does not exceed the following thresholds:

-150 dB(W/m<sup>2</sup>) in any 4 kHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

-150 + 0.65( -5) dB(W/m<sup>2</sup>) in any 4 kHz band for angles of arrival (in degrees) between 5 and 25 degrees above the horizontal plane;

-137 dB(W/m<sup>2</sup>) in any 4 kHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

These limits relate to the power flux-density which would be obtained under assumed free-space propagation conditions.

In the bands above 1 GHz, for those assignments to be made within the context of [ITU-R-IS-849], the coordination area is as determined therein.

As a consequential change to the U.S. proposal to make polarization a mandatory data element for all cases in Appendix S4, i.e., USA/ /94, the United States is proposing to modify Appendix S8. This proposal would incorporate by reference the earth station radiation patterns set forth in ITU-R Recommendation 465 in relation to those set forth in ITU-R Recommendation 731.

## APPENDIX S8

### Method of Calculation for Determining if Coordination is Required

#### 2.2.3 Consideration of polarization isolation

USA/ /111 MOD      The polarization isolation factor described in this paragraph shall be ~~considered only if the administration responsible for each network has consented to such a course and has notified its polarization or published it for used to determine if~~ coordination under No. ~~1060~~ 3.4.a (S9.7) is required. In this case, the apparent increase in the equivalent satellite link noise temperature shall be determined by the following expressions:

$$\text{Case I} \quad \Delta T = \frac{\gamma \Delta T_s}{Y_u} + \frac{\Delta T_e}{Y_d}$$

$$\text{Case II} \quad \Delta T = \frac{\gamma \Delta T_s}{Y_{ss}}$$

where the values of  $\Delta T_s$  and  $\Delta T_e$  are those given in §2.2.1 and §2.2.2 and the values of the factors of polarization isolation  $Y_u$ ,  $Y_d$  and  $Y_{ss}$  are those given in the table below determined using the equations in ITU-R Recommendation 465 in relation to those in ITU-R Recommendation 731.

#### Reason:

Consequential to USA/ /94.

USA/ /112 SUP

~~RESOLUTION No. 110 (Orb-88)~~

~~Improved Procedures for Certain Bands  
of the Fixed-Satellite Service  
Is Known~~

Reason:

Consequential to USA/ /48.

USA/ /113 ADD

**RESOLUTION No. USA-S10**

**Relating to the Possible Bringing Into Use  
of Article S10 under Certain Conditions  
once the Definitive Decision on  
VGE Recommendation No. 2/5  
Is Known**

The World Radiocommunication Conference (Geneva, 1995),

*considering*

1 that preceding conferences have developed plans;

2 that these plans may relate to assignments or to  
allotments;

3 that assignment and allotment plans fundamentally differ  
as to the complexity of their maintenance;

4 that, in addition to worldwide plans, regional plans exist catered to specialised needs in a particular part of the world;

5 that plans, by their nature, are dated;

*considering in particular*

1 that the Voluntary Group of Experts is to be commended for fostering the belief that a single plan modification procedure might suffice;

2 that the question of universal applicability of one procedure requires greater consideration than most;

*noting*

1 that most plans are accompanied by a dedicated procedure specifically catered to that plan's updating;

*recognising*

1 that in Recommendation No. 2/5 the VGE foresaw the possible treatment of that Recommendation at WRC-97 with respect to its possible applicability to the world plans of Appendices 30 and 30A;

2 that in like manner it foresaw the need to decide upon Recommendation No. 2/5 before treating the applicability of Article S10;

*is of the opinion*

that one universal plan modification procedure could contribute complications rather than enhance simplicity, and

*is of the further opinion*

1 that, for this reason, great care must be exercised before deciding upon this question;

2 that the answer thereto may depend, in part, upon whether the plan has been drawn up by a world radiocommunication conference or by a regional radiocommunication conference;

*resolves*

1 that this conference, in reviewing VGE **Recommendation No. 2/4**, has decided to incorporate the existing plan modification procedure for Appendix **S25** within that Appendix, thereby rendering it self-contained for simplification of use;

2 that this conference, in reviewing VGE **Recommendation No. 2/5**, has decided to defer to a future world radio conference the question of whether Article **S10** should be applied to the world plans of Appendices 30 and 30A;

3 that, consequential to the above and with regard to VGE **Recommendation No. 2/6**, no further action is required on Appendix **S6**, and the relevant provisions of Appendices 30 and 30A shall continue in force;

4 that this conference, in reviewing VGE **Recommendation No. 2/7**, has decided not to modify Appendices 26, 27 and 30B;

5 that the matter of one universal modification procedure for all plans, or all subsequent plans, has not matured for decision at this conference; and

6 that **Article S10** appearing in Annex 1 be considered by future regional radio conferences or world radio conferences for possible application to future plans.

**Reason:** To act upon four VGE Recommendations.

# Annex 1

## to

### RESOLUTION NO. USA-S10

	ARTICLE S10	VGE Note 1	<u>General Statement applicable to the whole of Article S10</u>
	<b>Procedure for Modification of a Frequency Allotment or Assignment Plan</b>		This new Article S10 embodies the principles adopted by the VGE
S10.1	4.1 For all world frequency allotment or assignment plans contained in Appendices to these Regulations, the Bureau shall maintain the master copies of the plans, incorporating any agreed modifications <sup>VGE Note 7</sup> , and shall provide such copies in an appropriate form for publication by the Secretary-General when justified by circumstances.		for drafting the Simplified Procedures, especially: a) the means of identifying affected administrations; b) transparency in operation of the procedure; and
S10.2	4.2 Before notifying any assignment which is subject to a plan the administration shall ensure that it is in conformity with the plan. <sup>1</sup> If the assignment is not in conformity the administration shall apply the procedure <sup>VGE Note 8</sup> to effect an appropriate modification to the plan by seeking the agreement of the administrations, which are identified in accordance with Appendix S6, as having planned allotments or assignments which may be affected by the proposed modification.		c) automatic termination of the procedure with no open end.
S10.2.1	4.2.1 An assignment is subject to a plan when it is for a station in a radiocommunication service and in a frequency band and in a geographical area covered by a plan. An assignment is in conformity with the plan, if it appears in the plan, or corresponds to an allotment in the plan, or if the procedure for modification of the plan has been successfully applied.		

GE Note 1 The scope of application of Article S10 to be decided by the WRC-95.

GE Note 7 Regional plans have legally different sources and status from the plans so far made by WARC's and attached as Appendices to the Radio Regulations. As such the regional plans are not open to any modification by a future world radio conference. It would NOT therefore be possible for the WRC-95 to modify the procedures of these regional plans. It would, however, be possible for the WRC to consider the potential value of the Simplified Procedures to these plans and to adopt Recommendations to the appropriate future regional conferences urging substitution, to the maximum feasible extent, of elements of the Simplified Procedures.

GE Note 8 The WRC-95 will need to decide whether this Article is to be applied to the Plans of Appendices 25, 30 and 30A. The VGE recommends that it should NOT be applied to the Plans of Appendices 26, 27 and 30B

S10.2.2	<sup>2</sup> 4.2.2 Where an existing plan contains a supplementary or alternative procedure that procedure shall continue to be applied.	
S10.3	4.3 A proposed modification to a plan may consist of: a) a change in the characteristics of an entry in the plan; or b) the inclusion of a new entry in the plan; or c) the cancellation of an entry in the plan.	
S10.7	4.4 For the purposes of effecting a modification to a plan the administration concerned shall, having regard to the relevant provisions associated with the plan, identify the other affected administrations. It shall send to them a request for their agreement giving the relevant information listed in Appendix S4 and shall send a copy to the Bureau. This action shall be taken within the time limits specified in the relevant appendix.	
S10.8	4.5 Whenever there is a requirement to apply the procedure of modification of a plan and to effect one or more related forms of coordination, the requests shall be appropriately identified and they shall as far as possible be sent and published simultaneously.	
S10.9	4.6 The Bureau, upon receiving a copy of the request under No. 4.4 shall: a) determine in accordance with Appendix S6 the administrations whose allotments or assignments are considered to be affected; b) include their names in the information received under No. 4.4; c) publish the complete information in its Weekly Circular; d) promptly inform all administrations affected of its actions and the results of its calculations, drawing their attention to the relevant Weekly Circular.	
S10.14	4.7 Following receipt of the Weekly Circular, an administration believing that it should have been included in the request for agreement shall promptly inform the requesting administration, giving its reasons for doing so, with a copy to the Bureau, and shall request that its name be included. The Bureau shall study this information on the basis of Appendix S6 and the relevant Rules of Procedure and shall inform both administrations of its conclusions.	
S10.15	4.8 The administration seeking agreement and those with which it is sought, or the Bureau, may request any additional information they consider necessary. The Bureau shall be sent copies of any such requests and the replies.	
S10.16	4.9 Upon receipt of the request for agreement to the modification of the plan, the affected administration shall, within a period of four months from the date of publication of the relevant Weekly Circular, inform the requesting administration and the Bureau of its agreement <sup>vGE</sup> or indicate its disagreement with the reasons therefor. <small>Note 9</small>	44

GE Note 9

It is assumed that the Rules of Procedure will provide for the case when an administration informs the Bureau that it is prepared to accept a level of interference exceeding that resulting from the plan.



S10.17	<p>4.10 Any administration involved in this procedure may request the assistance of the Bureau in seeking agreement:</p> <ul style="list-style-type: none"> <li>a) when there has been no reply or decision within four months;</li> <li>b) in applying any step of this procedure;</li> <li>c) in carrying out any technical study necessary for the application of this procedure.</li> </ul>	
S10.21	<p>4.11 If, following action by the Bureau in response to a request for assistance under No. 4.10, the Bureau receives no reply or decision within three months of its request for a decision in the matter from an administration whose agreement has been sought, the administration which requested the agreement shall be deemed to have fulfilled its obligations under this procedure. It shall also be deemed that the administration which did not give its decision has undertaken:</p> <ul style="list-style-type: none"> <li>a) that no complaint will be made in respect of harmful interference affecting the services rendered by its stations which may be caused by the use of the assignment in conformity with the proposed modification to the plan, and</li> <li>b) that its stations will not cause harmful interference to stations using the assignment in conformity with the proposed modification to the plan.</li> </ul>	
S10.24	<p>4.12 When the Bureau finds that this procedure has been concluded, either by obtaining the agreement of the administrations concerned or by the application of No. 4.11, the Bureau shall up-date the master copy of the plan. The new or modified entry in the plan shall then have the same status as others appearing in the plan and shall be considered as being in conformity with the plan.</p>	
S10.25	<p>4.13 If no agreement is reached between the administrations concerned the Bureau shall carry out any study that may be requested by those administrations. The Bureau shall inform them of the results and of any recommendations it may be able to offer for a solution of the problem.</p>	
S10.26	<p>4.14 In the case of continuing disagreement the Bureau shall undertake a technical study under the Rules of Procedure. In the event of a favourable conclusion the proposed modification shall be entered in the plan with the indication that it shall be taken into account in any subsequent modifications to the plan.</p>	
S10.27	<p>4.15 When a proposed modification to a plan involves developing countries, administrations shall seek all practicable solutions conducive to the economic development of the radiocommunications systems of those countries.</p>	

United States of America  
Proposals for Agenda Item 1  
Simplified Procedures  
HF Broadcasting Seasons

ITU-R Task Group 10/5 has suggested that WRC-95 defer until 1997 the question of substituting Article S12 developed by the VGE for the present Article 17 of the Radio Regulations. We support this view.

For the reasons given below, we do believe that action should be taken by WRC-95 to replace the four-season HF broadcasting structure set forth in Article 17 with a distinctly preferable two-season structure based on the equinox dates.

- Replacing the present four-season structure with a two-season one would facilitate the complex task of coordinating HF broadcasting schedules and would produce savings in traveling and other costs associated with coordination meetings;
- From both propagational and administrative points of view, the most promising approach would be to divide the year into two seasons of equal length, each season beginning on the Sunday following the equinox;
- The beginning of the April schedule would correspond to the local winter/summer ("clock") time change in a large part of the world, thus reducing the number of modifications to HF broadcasting schedules made necessary by local "clock" time changes;
- The two seasons would correspond to those already in use by HF broadcasting organizations in coordinating their HF broadcasting schedules.

NOTE TO THE GENERAL SECRETARIAT: It is recognized that practical considerations may make it necessary, in incorporating the present proposal into a conference working document, to reproduce existing Article 17 in Article S12 format, adding "S" numbers opposite the existing provisions of Article 17 and making other editorial modifications.

## ARTICLE 17

(VGE Recommended Article S12)

Planning and Procedures for the Bands Allocated Exclusively  
to the Broadcasting Service Between 5 950 kHz and 26 100 kHz

USA/ /1

NOC 1736 to 1747

### Section IV. Consultation Procedure

USA/ /2

MOD 1748

§ 4. ~~Periodically,~~ Twice yearly,  
administrations shall submit to the ~~International  
Frequency Registration Board Bureau~~ the projected  
seasonal schedules of their broadcasting stations in the  
HF bands allocated exclusively to the broadcasting  
service ~~between 5 950 kHz and 26 100 kHz.~~ These  
schedules shall cover each of the following ~~seasonal  
propagation periods~~ seasons and shall be implemented at  
0100 UTC ~~on the first Sunday of the period concerned:~~

<del>March Schedule</del>	<del>March and April</del>
<del>May Schedule</del>	<del>May, June, July and August</del>
<del>September Schedule</del>	<del>September and October</del>
<del>November Schedule</del>	<del>November, December, January and February</del>

<u>April Schedule</u>	<u>Begins last Sunday of March</u>
<u>October Schedule</u>	<u>Begins last Sunday of September</u>

**Reason:**

To introduce editorial revisions, to replace references to the International Frequency Registration Board, and to substitute for the present four-season structure the more rational two-season one already in use by HF broadcasting organizations in coordinating HF broadcasting schedules.

USA/ /3

**NOC 1749 to 1772**

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United States of America

Proposals for Agenda Item 1 and 4

**MOD RESOLUTION 46**

**General:**

CPM95 expressed the view that coordination pursuant to Resolution 46 should be extended to feeder links in bands identified by WRC95 for feeder links to non-geostationary space stations of the mobile satellite service. It also offered suggestions that would reduce the amount of such coordination vis-a-vis the fixed service where conditions that it identified are met. And finally, CPM95 offered examples of regulatory text.

This administration is in general agreement with the assumptions CPM95 has offered. We believe that coordination under Resolution 46 is not required in certain cases involving the fixed service, and we believe that MSS feeder links in bands designated by this conference should fall under Resolution 46. We offer a modified Resolution 46 (MOD Res 46) to accomplish these aims and to effect certain other improvements.

As with its predecessor, MOD Res 46 should come into force on the day this conference rises.

## MOD RESOLUTION No. 46

### Interim Procedures for the Coordination and Notification of Frequency Assignments of Non-Geostationary Satellite Networks in Certain Space Services and the Other Services to Which the Certain Bands are Allocated

The World Administrative Radiocommunication Conference  
(Geneva, ~~1992~~ 1995),

*considering*

- a) that in several different space radiocommunication services there is increasing interest in the use of space systems using non-geostationary-satellite networks;
- b) that, in order to ensure the satisfactory operation of such networks, other networks and other radio services sharing the same frequency bands, taking into account the relevant allocations, there is a need for procedures to regulate the frequency assignments of non-geostationary-satellite networks;

USA/ /1 SUP c) ~~that the coordination methods for non-geostationary-satellite networks require specific criteria and calculation methods which are not yet available;~~

#### **Reason:**

ITU-R work since WARC-92 has evolved criteria and methodology in some cases.

USA/ /2 MOD      ~~dc) that, consequently, there is a need for interim procedures to be applied until such time as the coming into force of a suitable a future conference, with the benefit of further studies by the CCIR and taking account of the experience gained in practice, is able to adopt a permanent procedure such as that set forth in Chapter SIII of the simplified draft of the Radio Regulations.~~

**Reason:**

To recognise ITU-R progress on point to date.

USA/ /3 ADD      d) that there is a need as well for these interim procedures to be applied in certain bands made available by the present conference for the purpose of providing feeder links to space stations in non-geostationary-satellite networks of the mobile-satellite service;

**Reason:**

To extend applicability to feeder links.

USA/ /4 ADD      e) that preparatory work by the ITU-R demonstrates that the amount of coordination between stations of a non-geostationary satellite network on the one hand and the fixed service on the other can, in certain cases, be reduced below that envisaged in Resolution 46 (WARC-92) while precluding harmful interference being caused to either the space service or the fixed service;

**Reason:**

To simplify by eliminating unnecessary coordination.

*considering also*

USA/ /5 SUP      ~~e) that the Plenipotentiary Conference (Nice, 1989), initiated the formation of a Voluntary Group of Experts, one of whose tasks is to simplify the procedures of the Radio Regulations.~~



~~f) that any new procedures adopted by this Conference must therefore be as simple as possible and should, wherever appropriate, make use of the existing procedures of the Radio Regulations.~~

**Reason:**

Overtaken by events.

USA/ /6 (MOD) ~~ge)~~ that any interim procedures must take full account of the status of the allocations to services, both terrestrial and space, in frequency bands which may be used by non-geostationary-satellite networks;

**Reason:**

Consequential to USA/ /5.

USA/ /7 (MOD) ~~hf)~~ that any interim procedures must also take full account of the interests of all countries, including the state of development of their terrestrial and space radiocommunication services.

**Reason:** Consequential to USA/ /5.

USA/ /8 SUP ~~considering further~~

~~i) that the provisions of No. 2613 of the Radio Regulations, while necessary to safeguard geostationary-satellite networks in the fixed-satellite service from interference which might be caused by non-geostationary-satellite networks, would, if more widely applied, prejudice the development of such systems in other space radiocommunication services,~~

**Reason:**

Footnotes to the Table of Frequency Allocations have been proposed which treat this matter.

recognising

USA/ /9 MOD

that the operation of telecommunication systems in ~~the MSS~~ those bands allocated to the mobile-satellite service as well as bands allocated to the fixed-satellite service and used for feeder links of non-geostationary satellite networks of the mobile-satellite service must be in conformity with the International Telecommunication Constitution and Convention and the Administrative Regulations in force, in particular their respective preambles and, in this respect:

- a) the right of each Member to decide how or whether to participate in the above systems, and to determine the terms and conditions of access to such systems from its territory;
- b) the obligation for entities and organisations providing international or national telecommunications services by non-geostationary-satellite networks to operate at the point of delivery under the legal, financial and regulatory requirements of the Member of the Union in whose territory these services are authorised;

**Reason:**

To broaden the applicability to relevant bands addressed by this conference.

resolves

USA/ /10 MOD

1. that, pending the adoption of a permanent procedure such as that set forth in Chapter SIII of the simplified draft of the Radio Regulations by a future competent conference, the use of frequency assignments by:

**Reason:**

To signify the general acceptability of the VGE approach.

a) non-geostationary-satellite systems in the space services in relation to other non-geostationary-satellite systems, geostationary-satellite systems and terrestrial systems;

USA/ /11 ADD

b) feeder links supporting non-geostationary-satellite systems in the mobile-satellite service in relation to other non-geostationary-satellite systems, geostationary-satellite systems and terrestrial systems;

**Reason:**

To extend applicability to feeder links.

USA/ /12 MOD

bc) geostationary-satellite systems in relation to non-geostationary-satellite systems including feeder links supporting non-geostationary-satellite systems in the mobile-satellite service; and,

**Reason:**

To extend applicability to feeder links.

USA/ /13 MOD

cd) terrestrial systems in relation to the earth stations and space stations of non-geostationary-satellite networks to which this Resolution applies shall be regulated in accordance with the interim procedures and the associated provisions in the annex hereto;

**Reason:**

Consequential.

USA/ /14 MOD

2. That the interim procedures annexed to this Resolution apply in addition to those of Articles 11 and 13 for geostationary-satellite networks and shall replace those of Articles 11

and 13 for non-geostationary-satellite networks  
for the mobile-satellite service and the  
fixed-satellite service in those frequency bands  
specifically identified by footnote to Article 8,  
the Table of Frequency Allocations;

**Reason:**

To specify the applicability.

USA/ /15 MOD 3. that the interim procedures annexed to this  
Resolution shall be applied from ~~4 March 1992~~  
[ ] November 1995.

**Reason:**

To update Resolution 46.

**Annex 1**  
**to**  
**MOD RESOLUTION No. 46**

USA/ /16 MOD

**Interim Procedures for the Coordination and Notification of  
Frequency Assignments of Non-Geostationary Satellite Networks in  
Certain Space Services and the Other Services to Which the  
Certain Bands are Allocated<sup>1</sup>**

**Reason:**

To specify the applicability.

**Section A. General Information**

USA/ /17 MOD

A.1 The assistance of the ~~IFRB~~ BR can be requested in the application of the provisions of this annex. The following provisions shall apply: RR 1054 to 1054C under Section I, RR 1088 to 1103 under Section II, RR 1130 to 1144 under Section III in relation to terrestrial stations and earth stations operated in the opposite direction of transmission, and RR 1168 to 1181 under Section IV.

**Reason:**

To assist administrations.

USA/ /18 (MOD)

A.2 In the absence of specific provisions relating to the evaluation of the interference, the calculation methods and the criteria should be based on relevant ~~CCIR~~ ITU-R Recommendations agreed by the administrations concerned either as a result of Resolution 703 (Rev. WARC-92) or

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Section I, II and III apply to terrestrial services only in the case where a power flux-density threshold at the surface of the Earth (for a space station) or at the border of the territory of another administration (for an earth station) specified in a provision of the Radio Regulations is exceeded.

otherwise. In the event of disagreement on a ~~CCIR~~ ITU-R Recommendation or in the absence of such Recommendation, the methods and criteria shall be agreed between the administrations concerned. Such agreements shall be concluded without prejudice to other administrations.

**Reason:**

Consequential to the APP, Geneva, 1992.

USA/ /19 MOD

A.3 When applying the provisions of this Resolution for non-geostationary satellite networks, administrations should provide the following information in addition to that of Appendix 3 or Appendix 4.

~~i) right ascension of the ascending node,~~

~~ii) argument of the perigee,~~

~~iii) active service arc.~~

1) Orientation of the satellite transmitting and receiving antenna beams and their radiation pattern.

2) Type of modulation and multiple access.

3) Appropriate information required to calculate the affected region due to the MSS space stations. (As defined in draft new Recommendation ITU-R M.[Document 8/45].)

4) Maximum and average beam peak e.i.r.p./4 kHz and e.i.r.p./1 MHz for each beam.

5) The satellite antenna gain  $G(e)$  as a function of elevation angle at a fixed point on the Earth. (To be provided either as part of Appendix 3 or as a formula to convert existing Appendix 3 data.)

6) The spreading loss (for a non-GSO space station) as a function of elevation angle. (To be determined by equations or provided in graphical form.)

7) New data elements required to properly characterise non-GSO satellites:

$N_p$   $\equiv$  number of orbital planes;

$N_s$   $\equiv$  number of satellites in each orbital plane;

$j$   $\equiv$  right ascension of the ascending node for the j-th orbital plane, measured counter clockwise in the equatorial plane from the direction of the vernal equinox to the point where the satellite makes its south-to-north crossing of the equator ( $0 \leq j < 360$ );

USA/ /20 (MOD)  $i_j$   $\equiv$  inclination angle for the j-th orbital plane with respect to the reference plane, which is taken to be the Earth's equatorial plane of the Earth ( $0 \leq i_j < 180$ );

**Reason:**

To improve by aligning CPM95's output on existing usage.

$i$   $\equiv$  initial phase angle of the i-th satellite in its orbital plane at reference time  $t = 0$ , measured from the point of ascending node ( $0 \leq i < 360$ );

$a$   $\equiv$  semi-major axis;

$e$   $\equiv$  eccentricity (for circular orbit,  $e = 0$ );

$p$   $\equiv$  argument of perigee, measured in the orbital plane, in the direction

of motion, from the ascending node  
to perigee (0 p < 360°).

**Reason:**

To specify useful technical information.

**Section I. Procedure for the Advance Publication of Information  
on Planned Satellite Networks**

*Publication of information*

USA/ /21 (MOD) 1.1 An administration (or one acting on behalf of a group of named administrations) which intends to bring into use a satellite network within a satellite system shall, prior to the coordination procedure described in paragraphs 2.1 and 2.2, send to the ~~International Frequency Registration Board~~ Radiocommunication Bureau, not earlier than six years<sup>2</sup> and preferably not later than two years, before the date of bringing into service of each satellite network, the information listed in Appendix 4.

**Reason:**

Consequential to the APP, Geneva, 1992.

USA/ /22 (MOD) 1.2 Amendments to the information sent in accordance with the provisions of paragraph 1.1 shall also be sent to the ~~Board~~ Bureau as soon as they become available. Modifications which are of such a nature as to change significantly the character of the network may require recommencing the advance publication procedure.

**Reason:**

See USA/ /21.

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See also No 1550.



USA/ /23 (MOD) 1.3 On receipt of the complete information sent under paragraphs 1.1 and 1.2, the Board Bureau shall publish it in a special section of its weekly circular within three months and shall also, when the weekly circular contains such information, so advise all administrations by circular telegram. The circular telegram shall indicate the frequency bands to be used and, in the case of a geostationary satellite, the orbital location of the space station. When the Board Bureau is not in a position to comply with the time limit referred to above, it shall periodically so inform the administrations, giving the reasons therefor.

**Reason:**

See USA/ /21.

*Comments on Published Information*

USA/ /24 (MOD) 1.4 If, after studying the information published under paragraph 1.3, any administration is of the opinion that interference which may be unacceptable may be caused to assignments of its existing or planned satellite networks or to assignments to its existing or planned terrestrial radiocommunication stations, it shall, within four months after the date of the weekly circular containing the complete information listed in Appendix 4, send the administration concerned its comments on the particulars of the interference to its existing or planned satellite systems or to its existing or planned terrestrial stations. A copy of these comments shall also be sent to the Board Bureau. If no such comments are received from an administration within the period mentioned above, it may be assumed that the administration has no basic objections to the planned satellite network(s) of the system on which details have been published.

**Reason:**

See USA/ /21.